

Understanding the Benefits of Chatbots in Admissions Process

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ABSTRACT

Chatbots are being used on the websites of universities and colleges for the admissions process. This study attempts to understand the application of chatbots in higher education in MP. Chatbots are used by the students for various queries on admissions to seek information on the courses, eligibility, fees, infrastructure & facilities, placements etc. The usage of chatbots is increasing with the adoption of the digitalisation & the impact of COVID-19.

Keywords: Chatbots; admissions; online education; university education; virtual assistants; automation; digital strategy; India; Madhya Pradesh; digitalisation, EDTECH

I INTRODUCTION

Chatbots are being used by some universities and higher education institutions to help students query, respond & interact to obtain information.

Chatbots are computer program based applications that enable voice or text based conversations & interactions for providing information with the help of keywords, rules & artificial intelligence using a knowledge database. Chatbots can be programmed to enable basic query keyword based simple responses or complex cognitive conversations.

In 2021, 15% of customer service interactions are enabled by artificial intelligence (AI) based Chatbot's & virtual assistants as per estimates by Gartner.

II CHATBOT APPLICATIONS IN EDUCATION SECTOR

Chatbots can be used in wide range of applications in education sector it can be used both as an administrative tool as well as in teaching and learning. Institutions are looking at adopting chatbots but are either doubtful of the real benefits of chatbots or facing executional hurdles to implement them. However, many of them have now started to experiment & realise the benefits of chatbots. It can help in student support services, presenting crucial information, apart from teaching & learning.

Education chatbots help businesses to gather customers' needs for more personalized recommendations and validate student data, which helps counsellors spend less time answering trivial questions. Apart from more personalized course recommendation chatbot usage by universities can be used to streamline the admission process.

Internationally in the admission processes the universities have already started using higher education chatbots. Chatbots with AI capabilities can even work as intelligent teaching assistants. Chatbots can also evaluate the students learning outcomes & journey. An Artificial

Intelligence enabled chatbot can help students by sending them course contents via chat messages for more effective and interactive learning and can also answer queries in between.

There are various factors that higher education institutions and universities across the world are using chatbots on their websites & social sites. However, the key factor behind this shift is that it makes the higher education institutions and universities future ready.

III STUDY OBJECTIVE & OUTCOMES

From student's point of view - Identification of key moments of truths for effective career choice & greater student satisfaction during admissions.

From higher education institution point of view - Development of a framework for improving efficiencies & generating positive WOM for higher education institutions during admissions.

IV METHODOLOGY – PRIMARY RESEARCH

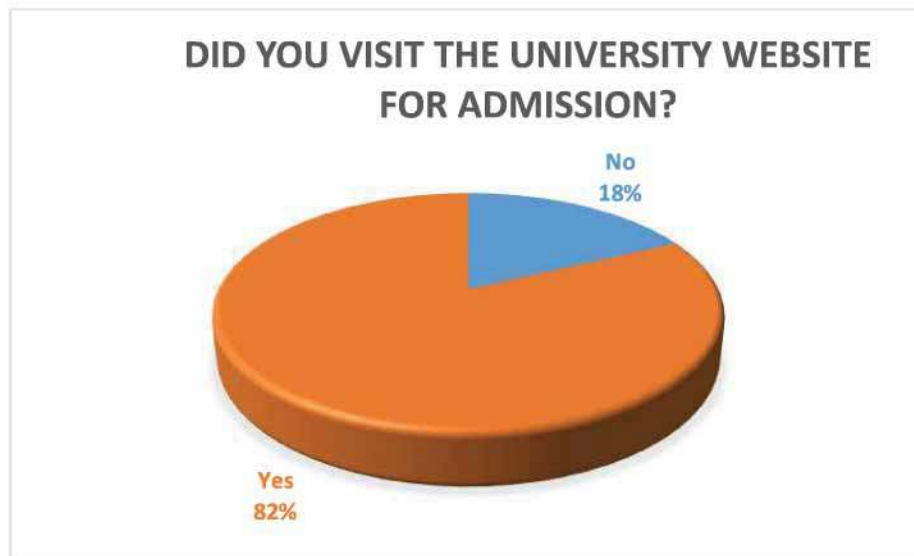
- (a) A structured questionnaire administered among students seeking to take admission in UG & PG courses across MP.
- (b) Analysis of the data from the live chats on chatbots & from digital campaigns.
- (c) Analysis of qualitative inputs from students, EDTECHs and HEIs.

V COVERAGE OF THE SURVEY

- (a) 55 colleges and universities in and around Madhya Pradesh
- (b) Survey conducted among 112 students seeking admissions in year 2020 and 2021
- (c) The student's responses were taken from diverse UG & PG programs

Findings – Primary Research

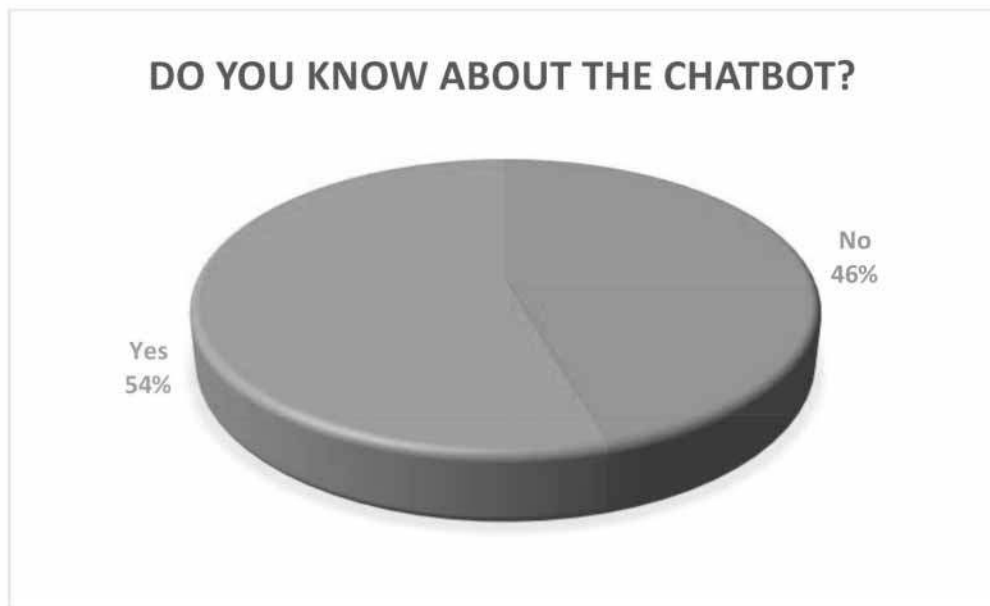
1. More than 82% of the students visited university for taking the admissions



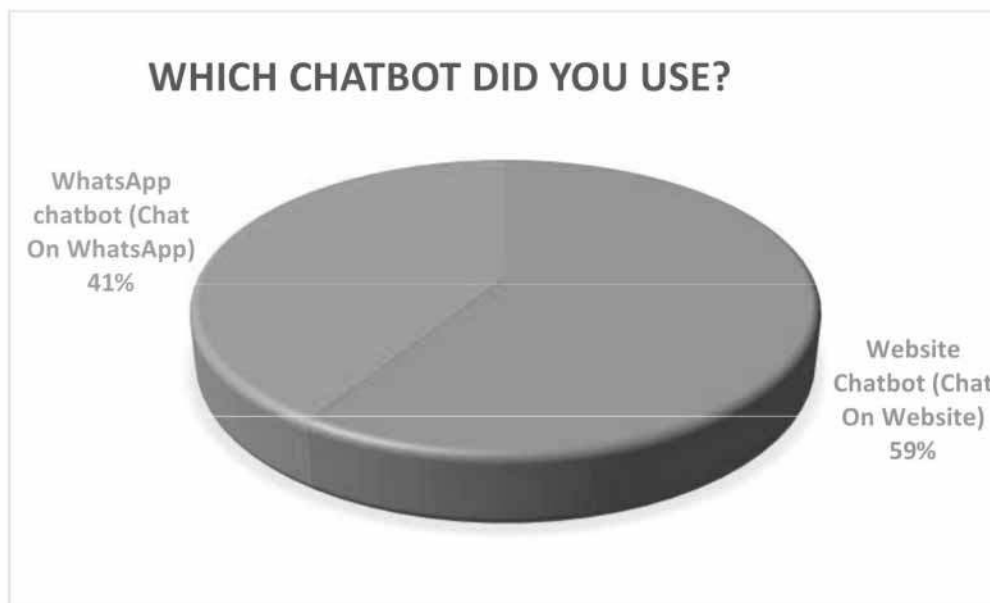
2. More than 41% took admissions online



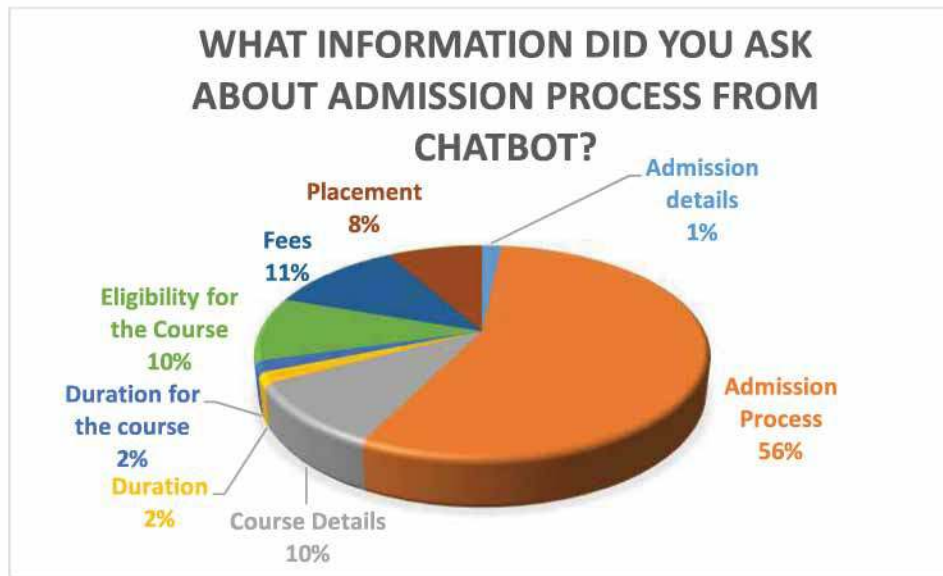
3. More than 54% of the students are aware of the chatbots & 50% have actually used it



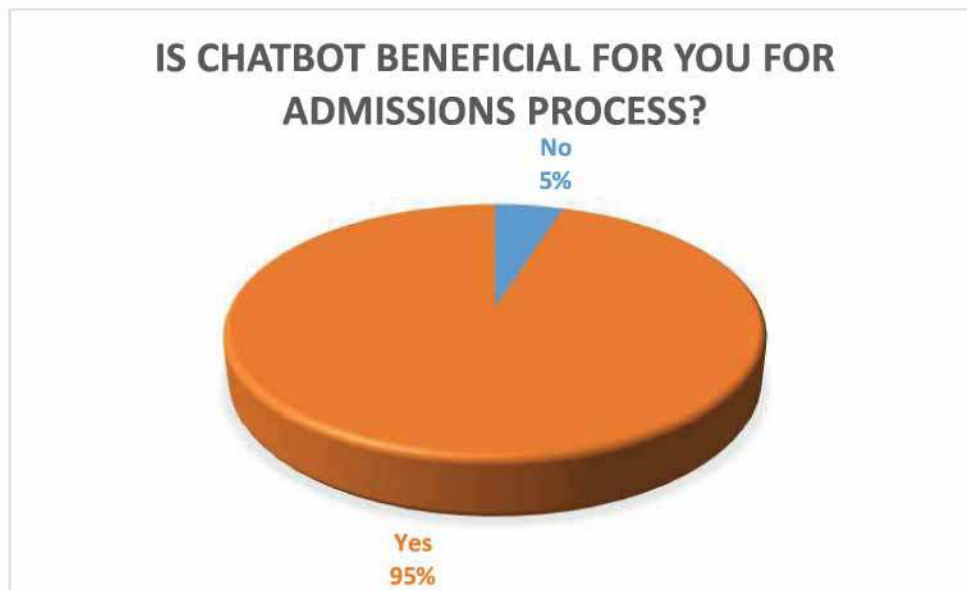
4. 41% used Whatsapp chatbot, while 59% used the website chatbot



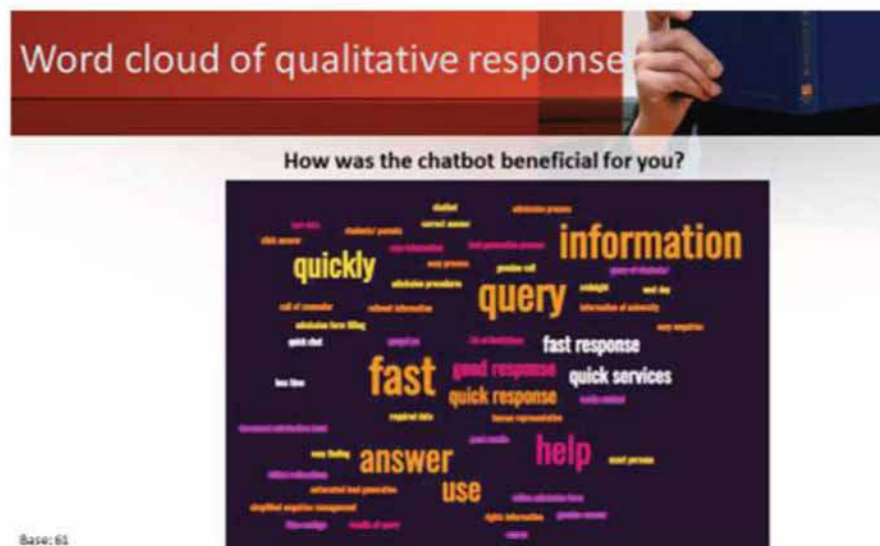
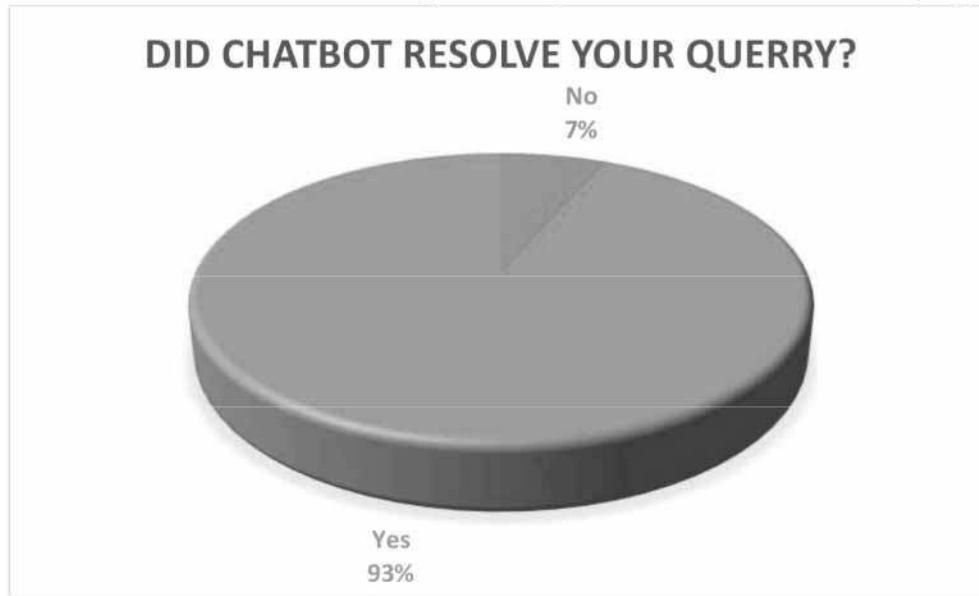
5. Admissions process, Admissions details, Courses & Eligibility were the most sought after area of information



6. 95% of the users found the information provided by the chatbot to be beneficial for them



7. 93% of the users said that the information provided by the chatbot resolved their query.



VI BENEFITS OF CHATBOTS IN HIGHER EDUCATION INSTITUTIONS & UNIVERSITIES

- (a) Automated leadgeneration & lead nurturing
 - (b) Streamlining the admissions process
 - (c) 24/7 student support and assistance after admissions
 - (d) Effective communication for enhanced student engagement
 - (e) Innovative teaching & learning processes
 - (f) Process of a 360-degree feedback regarding services & learning
 - (g) Repository of information
- (a) Automated Lead Generation For Admissions -** Chatbots can be used on the home page of the websites of higher education institutes to help the admissions seekers with the relevant information and can even collect their contact email and phone numbers so as to be able to send the relevant information via email and mobile. This also all ows the education institutes to simplify their lead management process as these automated chatbots can initiate personalized messaging to the website visitors based on the profile, location and other provided filters.
 - (b) Streamlining The Admission Process -** The digitalization in higher education has played an impornt role in the use of chatbots for admissions. Chatbots provide round the clock support via simple

chat messages for the repetitive queries by multiple students regarding courses, fees, eligibility, hostel facilities, scholarships, entrance tests, syllabus etc. A chatbot can help in answering personal user queries with simple responses & can help in seamless management of admissions process. If the same student queries need to be handled by the admissions team through offline channels it would be a time consuming process and would involve a lot of manpower, at the same time it would result in no standardised communication. Higher education chatbots eliminate all these issues. They can be programmed with automated answers to repetitive questions, and any number of prospective students can chat with them simultaneously, free of cost, at any hour of the day or night. Chatbots with Artificial Intelligence on university websites can learn from interactions & fine-tune the responses in such a way that helps in convincing the applicants more effectively to take admissions in the programs. Chatbots enable consistent support for student queries during the admissions process. There are lot of forms and processes that need to be completed to be eligible for admissions. Chatbots can automate the process and make it simple for students to complete the forms and the admission process. It is difficult to respond to numerous queries during the admissions, students often have multiple doubts and questions about the university. Chatbot come in handy in such situation and can address all the queries with respect to the admission procedure, hostel facilities, library services etc.

- (c) **24/7 student support and assistance after admissions** - Higher education chatbots not only provides a seamless admissions process for students who are offered admission but the same chatbot that helped them with course information and during the admissions can help them even before arriving on campus, new students can find out about available scholarships, hostel room allotment status, and the facilities and services that the university offers. Chatbots assist the students who have taken admission with their issues like library account, scholarships, hostels, policies etc. It helps universities in establishing great relationships with the students and reducing the workload on the administrative staff & faculties.
- (d) **Effective Communication For Enhanced Student Engagement** - Effective communication is the most important parameter for admissions in any institution of higher education. The applicants are millennials who are continuously online and need immediate answers to their questions. The students are accustomed to whatsapp and other messengers & the same can be used to botified the communication from the institution in order to engage in a better way with students. It can also be used to enhance the

learning process and to connect to the classroom, departments, alumni groups, and various activity clubs.

- (e) **Innovative Teaching & Learning Process** - Chatbots can be used in teaching & learning. With the help of intelligent teaching chatbots, professors can convert lectures into a logical sequence of small messages and design sequential conversations around the topic. In addition the chatbots can also respond to doubts/queries almost like FAQs. The timetables & assignments can also be configured on the chatbots for students to query. Chatbots can be very useful for learning languages since the the grammar rules can be sequentially presented along with the examples and applications. Learning is not restricted to just classrooms, rather the chatbots have the power to take the learning process to the next level by providing 24/7 availability. Intelligent tutoring systems provide personalized learning environment by analyzing their responses and how they go through the learning content. The Chatbots can analyse the interaction and accordingly modify next part of the topic for the student. After completion of the topic the chatbot can ask quizzes & post the results. In this way, the professor can also easily monitor the students' performances.
- (f) **Smart & Secure 360 Degree Feedbacks** - Constant feedback, is crucial for and effective learning outcome. It helps professors to understand the areas of improvement for students and also recalibrating the teaching process to better learning outcomes. Feedback from professors helps students in understanding areas where they need to put extra efforts. Quizzes and tests can be an easy tool for professors to administer using chatbots. Chatbots can even ask the students regarding the improvements in the syllabus, teaching methods. Analysis by the chatbots can be further given back to the students and the professors in the form of simply chat messages in an engaging and convincing way so that it becomes quite interesting.
- (g) **Repository Of Information** -During the interactions the chatbots accumulates a lot of data about the kind of questions asked by students, their chain of answered as well as unanswered queries & the student contact information. The chatbots can also collect information regarding the students academics based on the teaching, learning and assesment based interactions. This data may be used to analyse, reports and guide students, parents & the academic staff for the betterment of the students as well as the teaching learning methods. The information gap areas in the chatbot sessions may be used to add more questions with the relevant responses in the chatbot and also the related topics may be added to the website. This improvement process can be a regular

periodic exercise based on the data accumulated on the chatbot over a period of time.

VII BEST PRACTICES WHILE SETTING A CHATBOT FOR YOUR INSTITUTE

- (a) **The Chatbot should integrate well with the backend data & processes:** While choosing a chatbot solution it is important to note that the backend data and process should integrate well with the chatbot. There should be seamless exchange of required data between the existing CRM, ERP & Website databases & chatbot.
- (b) **Natural Language Processing ability along with speech support:** It is important to understand the intent of the user query so that the responses given by the chatbot look human like. Therefore use of Natural Language Processing (NLP) ability is important in a chatbot. In addition it is important to have speech recognition and text-to-voice response mechanism. Given the Indian context it is also important to have multilanguage functionality.
- (c) **Support chatbots with live chat functionalities:** The chatbot should be able to lead the user to a human assisted live chat in cases where it reaches limitation on answering specific queries. The live chat representative can transfer the query to the appropriate representative whenever human intervention is needed. In addition the chatbot should be AI enabled with machine learning functionality so that it can also learn from the live chat interactions to develop responses for the new queries.
- (d) **Conversational Intelligence:** The universities need to choose a chatbot development platform that help in creating a conversation flow create logical dialog paths along with alternative query scenarios. The Conversational AI need to be applied on the top of rule based conversational path to make the conversations human like and ensure appropriate exception handling mechanisms. It should be possible to easily adopt and create new conversation flow and branches based on the learning over a period of time.
- (e) **Tool for improving effectiveness, engagement and productivity of conversations:** The chatbot need to be integrated with the functionalities like lead capture, lead verification via email and mobile OTP. There should be CRM integration for the drip nurturing of the users/leads to create a better engagement and effectiveness based on the lead qualification and classification criterion.
- (f) **Users love chatbots that Keep Information Short & Simple (KISS):** Users love the chatbots that 'Keep the Information Short & Simple' (KISS), an ideal length of a query response should not be more than 2-3 sentences. Chatbot users are interested in quick and efficient responses and not long conversation messages, so keeping the chats crisp and informative

is the mantra, the responses may also be supported with the further suggestions in the form of a menu to choose for further query based on the dialog flow.

- (g) **Create a chatbot mascot with a brand persona:** It is good to give a personal touch to the users of your chatbot by creating a mascot with a brand persona. The brand persona can be created even by giving it a name and a tone of conversation matching with the brand represented.

VIII CONCLUSION

The usage of chatbots in education sector is expected to see unprecedented increase due to the increase in the digitalisation. This has been further accelerated by the COVID-19 scenario & in the post-COVID world both the students and the institutions are going to rely more and more on chatbots to replace the face-to-face human interactions.

In order to be future ready the institutions will have to embrace chatbot technology for better productivity in various spheres of operations, teaching & learning and student engagement initiatives. It is high time for institutions that have not adopted this technology to move fast and implement a Chatbot in student facing processes like admissions, counseling, student onboarding, online teaching assistants and assessments and feedback.

It is relatively easier and fast to implement a basic rule-based chatbot, however the future trend is towards adopting Conversational AI chatbots for better human like interactions. With the advent of virtual voice assistants like Alexa Echo, Google Personal Assistant, Siri, Microsoft Cortana etc there is a trend to upgrade to voice functionality on chatbots though they are yet to be refined to perfection. The language consideration is also important to keep in mind while implementing the chatbot given the diversity in Indian context.

While artificial intelligence based chatbots are future, there is no harm in making a start with simple rule based chatbots and gradually upgrade to more sophisticated smart bots with self learning capabilities based on the interaction data accumulated over a period of usage. It is high time to adopt chatbots now to be future ready!

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